

A NEW SECTION OF *BACCHARIS* (ASTERACEAE: ASTEREA), AND NOTES ON ALLIED TAXA

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ABSTRACT

A new section of *Baccharis* is described: sect. *Punctatae*, including six species formerly placed in sect. *Aristidentes* (*B. bigelovii*, *B. crassicuneata*, *B. mexicana*, *B. sulcata*, *B. thesioides*, and *B. zamoranensis*). *Baccharis palmeri* is excluded from sect. *Aristidentes* while the South American *B. hirta* is added. Six species (*B. auriculigera*, *B. huairacajensis*, *B. klattii*, *B. maxima*, *B. volubilis*, and *B. zumbadorensis*) are added to sect. *Tubulatae*. A key is provided to differentiate these allied sections, as well as the related sect. *Bogotenses*.

RESUMEN

Se describe una nueva sección de *Baccharis*: sect. *Punctatae*, la cual incluye seis especies previamente ubicadas en la sección *Aristidentes* (*B. bigelovii*, *B. crassicuneata*, *B. mexicana*, *B. sulcata*, *B. thesioides* y *B. zamoranensis*). *Baccharis palmeri* es excluida de la sección *Aristidentes*, mientras que la especie sudamericana *B. hirta* es agregada a ella. Seis especies (*B. auriculigera*, *B. huairacajensis*, *B. klattii*, *B. maxima*, *B. volubilis* y *B. zumbadorensis*) son agregadas a la sección *Tubulatae*. Se provee una clave para diferenciar estas secciones afines, incluyendo asimismo la sección *Bogotenses*.

In a revision of the infrageneric taxonomy of North and Central American species of *Baccharis*, Nesom (1990) proposed the section *Aristidentes* to include 12 species. Later, the same author (Nesom 1998) recognized two informal groups within this section: the “*Baccharis multiflora* complex”, including 6 species (*B. brevipappa* (McVaugh) G.L. Nesom, *B. mexicana* Cuatrec., *B. multiflora* Kunth – the type species of the section –, *B. serrifolia* DC., *B. sordescens* DC., and *B. zamoranensis* Rzed.), and the “*Baccharis thesioides* complex”, comprising 3 species (*B. bigelovii* A. Gray, *B. sulcata* DC., and *B. thesioides* Kunth). With further observation, the differences between these two groups have proved to be more significant, especially when two closely related South American taxa, sect. *Bogotenses* Cuatrec. and sect. *Tubulatae* Cuatrec., are also considered. Effectively, the “*B. multiflora* group” shares more features with these South American taxa than with the “*B. thesioides* group” (see key below); therefore, this taxon is here given formal recognition at sectional rank, as follows.

Baccharis* sect. *Punctatae Giuliano & G.L. Nesom, sect. nov. TYPE: *Baccharis bigelovii* A. Gray.

Sectioni *Aristidenti* similis, sed plantis glutinosis nidis pilosis vestitis, foliis uni- vel obscure trinervatis et achaeniis minoribus differt.

Erect shrubs or subshrubs, glutinous, covered by minute tufts of (microscopic) biseriate glandular hairs; on both leaf surfaces, each tuft is placed in a depression of circular contour, altogether forming a characteristic dotted pattern. Leaves pseudopetiolate, uni- or trinervate, margins aristate-serrate (rarely entire). Capitula pedicellate, arranged in simple or compound corymbs, altogether forming a false panicle. Involucres campanulate. Receptacles flat or slightly convex, alveolate, epaleate. Ratio of carpellate: staminate florets ca. 1:1. Carpellate corollas filiform, apically truncate and crowned by long and short biseriate hairs. Achenes terete, 1.2–2.2 mm long, 5–8-ribbed, glabrous or with few uniseriate hairs with apiculate terminal cell; pappus bristles in 1–2 series, persistent, slightly accrescent. Staminate corollas campanulate, 5-lobed at apex; style branches lanceolate, free; pappus bristles apically broadened.

Includes 6 species, distributed from the southwestern United States to southern Mexico.

1. **B. bigelovii** A. Gray, Rep. U.S. Mex. Bound., Bot. 84. 1859.
2. **B. crassicuneata** G.L. Nesom, Phytologia 84:43. 1998.
3. **B. mexicana** Cuatrec., Brittonia 12:195. 1960.
4. **B. sulcata** DC., Prodr. 5:419. 1836.
5. **B. thesioides** Kunth, in Humboldt, Bonpland & Kunth, Nov. gen. sp. 4 [quarto]: 61. 1820.
6. **B. zamoranensis** Rzed., Brittonia 24:400. 1972.

Formerly, *B. mexicana* and *B. zamoranensis* were included in the “*B. multiflora* complex” of sect. *Aristidentes* (Nesom 1998) but now are classified within *Punctatae*, as they are glutinous plants dotted with tufted hairs.

Section *Punctatae* is closely related to sect. *Aristidentes*, sect. *Bogotenses* and sect. *Tubulatae*; the four taxa form a complex characterized by the capitulescence architecture (a false panicle of compound corymbs), achenes with 5–8 pale ribs, glabrous or with few uniseriate hairs, and pappus with persistent accrescent bristles in 2–3 series. These sections can be differentiated by the following features:

1. Plants glutinous, dotted by minute (microscopic) tufts of glandular hairs, without other vestiture. Leaves uni- or obscurely trinervate. Achenes 1.2–2.2 mm long. _____ Sect. **Punctatae**
1. Plants non-glutinous, non dotted by minute hair tufts but densely or loosely clothed by conspicuous (non-microscopic), non-glandular uniseriate hairs with acuminate terminal cell, often incurved. Leaves usually reticulate-nervate, trinervate in some species. Achenes 2.5–4 mm long.
2. Scandent shrubs, densely pubescent, with long uniseriate conic hairs accompanying the uniseriate hairs with acuminate terminal cell. Capitula often grouped in few-headed inflorescences; carpellate involucres 7–9 mm long. Staminate florets with tubulose elongate limb and short straight lobes. _____ Sect. **Tubulatae**
2. Scandent or erect shrubs, without conic hairs but densely or loosely clothed by

uniseriate hairs with acuminate terminal cell. Capitula usually grouped in many-headed inflorescences; carpellate involucre 3–6 mm long. Staminate florets with short limb and developed recurved lobes.

3. Scandent shrubs, subglabrous, with few isolated hairs. _____ Sect. **Bogotenses**
 3. Erect shrubs, densely pubescent. _____ Sect. **Aristidentes**

The following couplet provides a summary of the contrasts between sect. *Punctatae* and the taxon from which it was segregated, sect. *Aristidentes*:

1. Plants glutinous, dotted by minute tufts of (microscopic) glandular hairs, without other vestiture. Leaves uni- or obscurely trinervate. Achenes 1.2–2.2 mm long. _____ Sect. **Punctatae**
 1. Plants non-glutinous, non dotted by minute hair tufts but densely clothed by conspicuous (non-microscopic), non-glandular uniseriate hairs with acuminate terminal cell, often incurved. Leaves usually reticulate-nervate, trinervate in some species. Achenes usually 2.5–3 mm long. _____ Sect. **Aristidentes**

Further notes on sect. *Aristidentes*

Several of the species originally included in sect. *Aristidentes* are here relocated to the new section *Punctatae*. *Baccharis palmeri* Greenm. is also here excluded from sect. *Aristidentes* since it lacks the pubescence characteristic of this taxon, and it is placed in sect. *Angustifoliae* Baker emend. Cuatrec., considering that it produces solitary capitula at the apex of the branches, which often are grouped to form false capitulescences.

On the other hand, one species needs to be added to sect. *Aristidentes*, since it presents its typical features: *B. hirta* DC., from southern Brazil and Uruguay. This species was previously classified in the formerly heterogeneous sections *Trinervatae* DC. (Candolle 1836), *Cuneifoliae* DC. (Hooker & Arnott 1841), *Oblongifoliae* DC. (Baker 1882) and *Paniculatae* Heering (Heering 1904). With the 4 South American species added to sect. *Aristidentes* by Giuliano (2001), the number of species for the section becomes 11: *B. brevipappa* (McVaugh) G.L. Nesom, *B. hirta* DC., *B. lilloi* Heering, *B. malibuensis* R.M. Beauch. & Henrickson, *B. multiflora* Kunth, *B. plummerae* A. Gray, *B. polygama* Ariza, *B. pulchella* Sch. Bip. ex Griseb., *B. racemosa* (Ruiz & Pav.) DC., *B. serrifolia* DC., and *B. sordescens* DC.

Addition of species into sect. *Tubulatae*

Section *Tubulatae* was founded by Cuatrecasas (1967), who included 3 Andean species (*B. fraterna* Cuatrec., *B. granadina* Cuatrec., and *B. grandiflora* Kunth). Here it is considered necessary to add 5 species more, as they accord with the diagnostic features of this taxon: the Andean *B. auriculigera* Hieron. (previously placed into sect. *Trinervatae*; Hieronymus 1905), *B. huairacajensis* Hieron. (placed in sect. *Oblongifoliae* when originally described; Hieronymus 1901), *B. klattii* Benoist (never classified before), *B. volubilis* Kunth (formerly in sect. *Oblongifoliae*; Candolle 1836), and *B. maxima* Baker, endemic of the state of Rio de Janeiro in Brazil (placed in sect. *Oblongifoliae* when described; Baker 1882).

Another species, the Venezuelan endemic *B. zumbadorensis* V.M. Badillo, is

also placed here although staminate specimens are still unknown, since it has scandent habit, long conic hairs, reticulate-nerved leaves, large few-headed capitula, and large achenes, which fit properly in *Tubulatae*. The nine species of this section are mainly Andean in distribution.

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